Navigation Tips

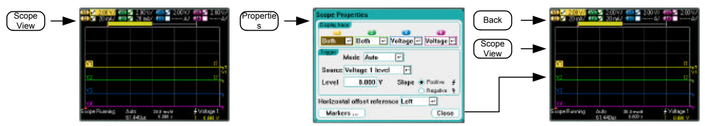
1. Lighted keys indicate the functions or outputs that are presently active or On. On

2. Use the Select Output keys to select an output to control.
The lighted key indicates the output that is presently selected.

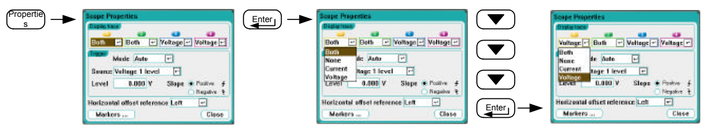
Select Output 1 2 3 4

3. Use the function keys to toggle between two related views or functions. Meter View, Scope View, Data Logger, Settings, Arb
For example:

4. Use the Properties key as a shortcut to set the properties for functions. Meter View, Scope View, Data Logger, Settings, Arb
For example:



5. Use the Navigation keys and the Enter key to select an item in a dropdown list.



6. Use the Numeric/Alpha keys to enter data. Numeric keys are active on fields that allow numeric characters. Alpha keys are automatically active on fields that allow alpha-numeric characters. Repeatedly pressing a key in an alpha-numeric field cycles through the list of choices. Pausing enters the value. Similar to text entry on a cell phone.

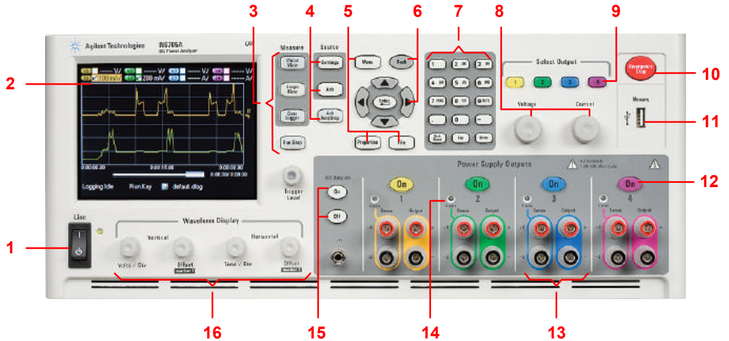
2 ABC → a → 2 ABC → b → 2 ABC → c → 2 ABC → A → 2 ABC → B → 2 ABC → C → 2 ABC → 2

Press Back Space to back up and remove the current character. Use ◀ and ▶ to move within the field.

7. Use the Close button or the Back key to exit a dialog window. All entries are saved when you exit the dialog.
You can also press any of the following function keys to exit a dialog and go to the indicated function:
Meter View, Scope View, Data Logger, Settings, Arb, File, Menu

8. Use the Menu key to access all of the programmable functions of the Agilent N6705A. The Help menu item provides assistance for some of the most commonly used features and functions of the instrument.

The Front Panel at a Glance



1 - Line Switch turns the instrument on or off.

2 - Display displays all instrument functions.

3 - Measure keys select the measurement function.
Run/Stop key starts and stops the measurement.

4 - Source keys program the source functions.
Arb Run/Stop starts and stops the arbitrary waveform.

5 - Menu, Properties, File keys access the indicated function.

6 - Navigation keys navigate through the dialog windows. Enter key selects; Back key cancels the selection.

7 - Numeric/Alpha keys enter numeric and alpha characters.

8 - Voltage/Current knobs set the voltage and current of the selected output.

9 - Select Output keys select an output to control. The lit key indicates the selected output.

10 - Emergency Stop turns off all outputs immediately.

11 - Memory Port for connecting a USB Memory device.

12 - On keys turn individual outputs on or off; outputs are on when the key is lit.

13 - Output terminals + and -- output and sense terminals for all outputs.

14 - 4 Wire indicator + and -- sense terminals are active when indicator is lit.

15 - All Outputs On/Off keys turns all outputs on or off according to the specified delays.

16 - Waveform Display knobs control the scope and data logger views.

Additional Information

Built-in instrument help
Press the Menu key and scroll to the Help item. Press Enter. Select a Help item from the menu.

Agilent N6705A User's Guide
Electronic version is available on N6705A CD-ROM and is downloadable from http://www.agilent.com/find/N6705. Printed version is available as Option ABA.

N6705A Product Reference CD-ROM
All product documentation, software, and example progams are included on the Agilent N6705 Product Reference CD-ROM.

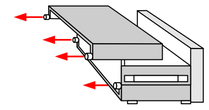
Printed In Malaysia April 2007

N6705-90005 Edition 1

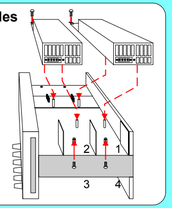
Agilent N6705A DC Power Analyzer
Quick Start Tutorial

Installing the power modules

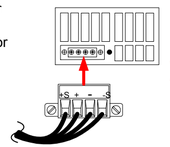
1. Remove the top and bottom covers.
Loosen the thumbscrews to remove the covers.
Turn the unit upside-down to remove the bottom cover.



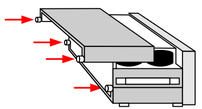
2. Install the power modules in the instrument.
Align the module over the pins and push it down onto the connector.
Use a T10 Torx driver and install the two screws at each end of the module.
Turn the unit upside-down to install more modules.



3. Connect the output cables.
Push the harness connector into the power module. Use the correct size connector for the power module.
Tighten the locking screws on the small connectors.
Place the unused cables in the space between the modules and the front panel.

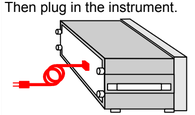


4. Install the top and bottom covers.
Push the top and bottom covers into place and tighten the thumbscrews.



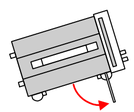
Preparing the instrument for use

1. Connect the power cord.
Then plug in the instrument.

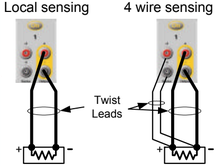


The instrument adjusts to the power line voltage. There are no switches to set or fuses to change.

2. Position the instrument.
Lower the extension bar for easier viewing.



3. Connect the load (optional).
Local sensing 4 wire sensing



Agilent Technologies

Using the DC Source

1. Press the Line switch to turn on the instrument.

The self test takes a few seconds; the instrument then defaults to Meter View with Output 1 selected. Digits on the display vary according to the installed power module.

2. Press the Select Output keys, or use the navigation keys to select a different output.

The Select Output key will light to indicate the selection.

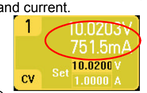
3. Turn the voltage and current knobs to set the output voltage and current.

The front panel V and A Set fields will indicate the values that the voltage and current are set to. Watch the values change as you rotate the knobs.

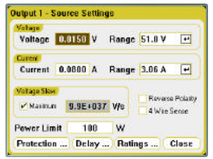
4. Press the On 1 key for the selected output.

The output voltage will rise to the voltage setting when the unit is operating in constant voltage (CV) mode.
The output current will rise to the current setting when the unit is operating in constant current (CC) mode.

The voltage and current meters display the actual output voltage and current.



5. Press Settings to program additional functions for the selected output.



* Voltage slew rate
* 4 Wire remote voltage sensing
* Over-voltage/over-current protection (select Protection)
* Output turn-on/turn off delays (select Delay)

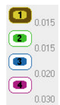
Using the Arbitrary Waveform Generator

1. Press the Arb (arbitrary waveform) key.

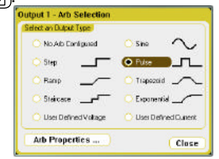
The Arb Preview window displays any waveforms that have been configured.

2. Use the navigation keys to select an output.

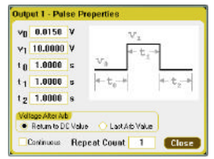
The dark background identifies the selected output.
Press the Enter key to select the output.



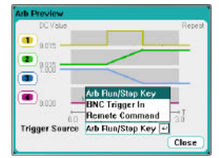
3. Use the navigation keys to select a waveform. Then press Enter.



4. Press Properties Use the navigation and number keys to configure the Pulse properties.



5. Press Close or Back. Use the navigation keys to select the trigger source for the Arb.



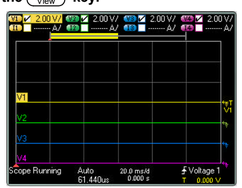
6. Press On 1 to turn on the selected Arb outputs.

7. Press Meter View to view the output voltage and current values when the Arb is generated.

8. If the trigger source is Arb Run/Stop key, press Arb Run/Stop to start the Arb.

Using the Scope to Measure the Output

1. Press the Scope View key.



2. Use the navigation keys to select the trace settings that you wish to adjust and display.

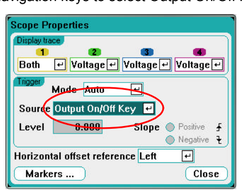
Select the current trace for output 1 (I1).
The colored rectangle identifies the selected trace.
Press the Enter key to turn the trace on or off.
If the box is checked ☑, the trace is turned on.

Some power modules can display either voltage or current traces; but not both.

3. Use the Volt/Div knob to adjust the amplitude.

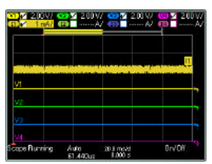
4. Press Properties to select the trigger source.

Use the navigation keys to select Output On/Off Key.



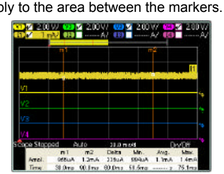
5. Press Close or Scope View when done.

6. Press On 1 to trigger a scope measurement.



7. Press Scope View to display the markers.

Use the Marker (Offset) knobs to move the markers.
Calculations apply to the area between the markers.

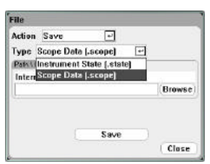


Saving the Scope Measurement

1. Press File to save the scope measurement.

Select Save.

2. Use the navigation keys to select Scope data.



3. Navigate to the File Name field and enter the name under which to save the scope data.

Alpha keys automatically become active on data fields that allow alpha and numeric characters. Repeatedly pressing a key cycles through the list. This is similar to text messaging on a cell phone.

4. Select the Save button to save the data.

Additional File functions:

* Saving and recalling instrument states
* Manipulating files and folders
* Exporting and importing arbitrary waveforms
* Saving screen captures

Using the Data Logger

The Data Logger is similar to the Scope, but is optimized for collecting data over an extended time. Note: Option 055 deletes the data logging function. Data Logger Properties

1. Press then .

Specify the duration and the sample interval.
Specify if you wish to log minimum and maximum values in addition to the average values.
Specify data log.

2. Press On 1 to turn on the data logger outputs.

3. Press Run/Stop to start the data logger.